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ENVIRONMENTAL PROTECTION AGENCY

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PROGRAMS UNDER CLEAN WATER, SAFE DRINKING WATER AND RESOURCE CONSERVATION AND RECOVERY ACTS

Guidance for FY 1980 State/EPA Agreements

[6560-01-M]

ENVIRONMENTAL PROTECTION AGENCY

[FRL-1069-6]

GUIDANCE FOR FISCAL YEAR 1980 STATE/EPA AGREEMENTS

This notice is published to advise that the following policy statement and guidance document on FY 1980 State/EPA Agreements were distributed to the Environmental Protection Agency (EPA) Regional Offices in February 1979. The policy statement and guidance document set forth EPA requiremens for the development and implementation of FY 1980 State/EPA Agreements for programs under the Clean Water Act, the Safe Drinking Water Act and the Resource Conservation and Recovery Act.

Although there is currently no central EPA regulation dealing with State/EPA Agreements, the requirement for such Agreements appears in the following five EPA regulations: (1) Section 35.738-6 of the Resource Conservation and Recovery Act grant regulations; (2) Section 35.660(d) of the Underground Injection Control grant regulations; (3) Section 35.1016(c) of the Construction Management Assistance grant regulations; (4) Section 35.1600 of the Clean Lakes grant regulations; and (5) Section 35.1507 of the proposed Water Quality Management grant regulations.

For additional information, contact: Ms Merna Hurd, Director, Water Planning Division (WH-554), Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460.

Dated: February 28, 1979.

JAMES N. SMITH,
Assistant Administrator for Water and Waste Management.

PURPOSE

This memorandum sets forth EPA policy requirements on the development and implementation of FY 1980 State/EPA Agreements for programs under the Clean Water Act, the Safe Drinking Water Act and the Resource Conservation and Recovery Act (that is, those programs under the Office of Water and Waste Management.)* This memorandum also sets forth general requirements for the content of the Agreement. We are enclosing guidance on State/EPA Agreements which expands upon this policy.

The Administrator, in his memorandum of December 27, 1978, stated that guidance on State/EPA Agreements would be issued in lieu of a central regulation this year. He reaffirmed the Agency's commitment to the development of Agreements and gave the policy the Agency's highest priority. This Office has been designated to implement that policy.

BACKGROUND

Over the next two years, almost one-half billion dollars is expected to be granted to States by the Environmental Protection Agency for planning and management under the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Safe Drinking Act (SDWA). It is the goal of both EPA and the States to ensure that these laws are being implemented in an integrated, cost-effective and coordinated manner. Beginning in FY 1980, the State/EPA Agreements will present a practical and comprehensive mechanism by which the States and EPA can integrate and manage the technical and financial assistance programs to States under sections 106, 205(g), 208 and 314 of the CWA, sections 3011 4008 and 4009 of RCRA and sections 1442(b)(3)(C) and 1443(a) and (b) of SDWA.

The idea of an integrated approach to solving environmental problems is not new. A number of Regions and States have had integrated problem solving procedures for years, such as multi-year environmental strategies and use of consolidated grants. EPA Headquarters has further encouraged this type of integration in FY 1979 by directing the Regions and States to develop State/EPA Agreements covering the Clean Water Act programs.

The State/EPA Agreement process is designed to (1) ensure that the large sums of money going to the States produce tangible results in solving priority environmental problems and (2) maximize available resources to identify and solve priority environmental problems that separate programs cannot handle alone. The Agreement process will reflect important EPA, State and local decisions on environmental and program problems, priorities, timing, responsibilities and allocation of resources. At the same time, the Agreement process will comply with the national commitment to eliminate unnecessary paperwork and reduce duplication of effort. It will focus top management attention in EPA Regional Offices and the States on environmental problem solving decisions, and on the evaluation of how the decisions are carried out.

POLICY

- Beginning in FY 1980, the State/EPA Agreement is to include the EPA and State program responsibilities and activities under sections 106, 205(g), 208 and 314 of the Clean Water Act, sections 3011, 4008 and 4009 of the Resource Conservation and Recovery Act (RCRA) and sections 1442(b)(3)(C) and 1443(a) and (b) of the Safe Drinking Water Act (SDWA) (hereafter referred to as the "covered" programs). In addition, the States are encouraged to integrate and/or coordinate other environmental programs into the State/EPA Agreement wherever feasible.
- The State/EPA Agreement (SEA) must be completed and signed before award of grants under any "covered" program, except that for the 205(g) program, it must be completed before execution of the delegation agreements.*
- Under the proposed WQM regulations which are scheduled for final publication in March 1979, the State 106 grants for water pollution control programs will be allocated to the Regions using the existing formula. The allotments to the States, however, will be based on negotiations in the State/EPA Agreement process.
- Although the State and EPA are responsible for negotiating the Agree-

* The EPA is mandating State/EPA Agreements based on the following authorities: Sections 1006 and 2002 of RCRA, 42 U.S.C. 6905, 6912; Sections 101(f) and 501(a) of the CWA, 33 U.S.C. 1251(f), 1361(a); Section 1450(a)(1) of SDWA, 42 U.S.C. 300j-9(a)(1); Section 3 of the Reorganizational Plan No. 3 of 1970 and the accompanying President's Message (5 U.S.C. App.); and the Joint Funding Simplification Act, 42 U.S.C. 4251-4261.

* Following are EPA Grant Regulations that cover State/EPA Agreements:

1. Section 35.738-6 of the RCRA grant regulations states that, "Beginning in FY 1980, State programs funded under the Act will be part of the State/EPA Agreement, and the State/EPA Agreement must be completed before grant award." (Interim Regulations, published September 25, 1978.)

2. Section 35.660(d) of the Underground Injection Control grant regulations states that, "Beginning in fiscal year 1980, State programs funded under the Act will be part of the State/EPA Agreement and the State/EPA Agreement must be completed before grant award." (Final Grant Regulation, published October 12, 1978.)

3. Section 35.1016(c) of the 205(g) regulations states, "In fiscal year 1979, the Regional Administrator and the State must develop the State/EPA Agreement sufficiently before executing a delegation agreement under this subpart so that the latter will be consistent with the State/EPA Agreement. Beginning in FY 1980, State programs funded under § 205(g) of the Act will be part of the State/EPA Agreement and the State/EPA Agreement must be completed before execution of the delegation agreement." (Final Regulation, published September 20, 1978.)

4. Section 35.1507 states that EPA funding for the State's WQM work program shall be withheld by the Regional Administrator pending execution of the SEA, except as otherwise determined by the Regional Administrator.

5. Section 35.1650-2 of the proposed Clean Lakes grant program regulations states that State programs funded under section 314 of the Act are a part of a State/EPA Agreement which must be completed before the grant is awarded.

ment, the public and other interested parties must also have the opportunity to participate in each step of the development of the agreement. In addition, the Regional and local planning and implementation agencies that the States have designated to participate in solid waste management (RCRA), water quality management (CWA) and other environmental programs must work closely with EPA, the States and the public to assure that agreement on cooperative strategies, priorities and responsibilities is attained.

● The State and EPA should also work closely with Interstate agencies funded under section 106 of the Clean Water Act in the development of strategies, priorities and responsibilities that will be set forth in the State/EPA Agreement. The States may delegate responsibility and funding to an Interstate agency for carrying out some portions of a State/EPA Agreement.

● Where an Indian tribe receives EPA assistance under two or more "covered" programs, the Regional Administrator and the Indian tribe may develop an Agreement to integrate, coordinate and manage the programs. The State should be involved in this process, wherever possible.

Enclosure:

GUIDANCE FOR FY 1980 STATE/EPA AGREEMENTS

OFFICE OF WATER AND WASTE MANAGEMENT

FEBRUARY 1979.

INTRODUCTION

The 1980 fiscal year (FY) will mark the start of a new era in planning, implementing and managing environmental programs at the Regional and State levels. Beginning in FY 1980, State/EPA Agreements will present integrated approaches to solving water supply, solid waste and water pollution control problems. The integration of these program areas will be a major step toward the objective of overall environmental planning and management versus an approach which tries to solve interrelated environmental problems in a piecemeal fashion, program by program.

The idea of an integrated approach to solving environmental problems is not new. EPA required all Regions and States to develop comprehensive State/EPA Agreements in FY 1979 covering Clean Water Act programs. Furthermore, a number of Regions and States have had an integrated orientation to problem-solving for years. What is new is that, starting in FY 1980, State/EPA Agreements will drive the integration and coordination of environmental programs in all States creating joint planning and implementation of Safe Drinking Water Act, Resource Conservation and Recovery Act and Clean Water Act programs.[a]

The State/EPA Agreement, which each State and its corresponding EPA Region will negotiate, will include a brief statement of environmental problems and objectives based on State problem assessments and strategies. Agreements will also include or reference work programs which integrate the various outputs under each of the "covered" programs.

The State/EPA Agreement will be a decision document which reflects important decisions on environmental priorities (including those set forth in the annual EPA operating guidance), administrative problems, timing, responsibilities and allocation of funds. It will be management tool which focuses top management attention on the evaluation and accomplishment of major environmental objectives. Finally, it will be a communication and information document useful to local governments, areawide agencies, affected or interested publics and others, developed with their participation and reflecting their views.

THE NEED FOR INTEGRATION

Enactment of the Clean Water Act (CWA), Safe Drinking Water Act (SDWA), and Clean Air Act (CAA) provided for controls on air and water pollution. Passage of the Resource Conservation and Recovery Act (RCRA) in 1976 closed the gaps in the waste disposal cycle, providing control for the disposal of pollutants on or in the land. Congress recognized the relationship among air, water and solid waste pollution and controls in section 1002(b)(3) of RCRA, which says:

> • • • as a result of the Clean Water Act, the Water Pollution Control Act, and other Federal and State laws respecting public health and the environment, greater amounts of solid waste • • • have been created. Similarly, inadequate and environmentally unsound practices for the disposal or use of solid waste have created greater amounts of air and water pollution and other problems for the environment and for health.

There are a number of reasons why it makes sense to emphasize the coordination and integration of environmental programs. Linking planning, implementation, and management of major environmental programs will allow a comprehensive and systematic approach to problem solving. This type of approach should lead to an identification of the best place in their overall life cycle to control pollutants. Furthermore, as a result of program integration, generators of pollution should be able to plan all necessary controls at one time. If dischargers are aware of the total costs of environmental controls, they may consider control strategies which include both source controls and product or process changes to reduce overall generation of pollutants and treatment costs.

Coordination and integration of environmental programs should also result in the reduction of procedural and substantive duplications. Since resources are limited at all levels of government, an integrated approach should maximize the environmental benefits from limited available resources. In addition, an integrated approach should minimize the unplanned migration of pollutants from one medium to another, i.e., from the air or water to the land and back to the water. Moreover, early and continuing public involvement will ensure that the evaluation and trade-off decisions made among alternative priority actions will include a broader set of concerns. As a result, the priority actions determined through the Agreement process will more likely be viable, reflecting a broader definition of the public interest.

STATE AND FEDERAL ROLES

Through passage of the Clean Water Act, Safe Drinking Water Act, and Resource Conservation and Recovery Act, Congress made clear its intent that States are to play a major role in environmental programs. Section 101(b) of the Clean Water Act, for example says:

> It is the policy of Congress to recognize, preserve and protect the primary responsibilities of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources • • •.

Congress charged EPA with establishing national environmental standards carrying out research and development, funding State programs and charting national objectives and policies. It is the State and local governments however, who plan, develop and carry out pollution abatement programs. In delineating Federal and State roles in SDWA, RCRA and CWA, Congress clearly had in mind a Federal-State partnership. The State/EPA Agreement is an example of the Federal-State partnership in action. It is a tangible product of joint negotiation, and includes a two-way obligation.

For its part, the State with EPA assistance, where necessary and feasible, will perform a series of problem-solv-

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[a] For FY 1980 the Agreement should include sections 106, 205(g), 208 and 314 of the Clean Water Act, sections 3011, 4008 and 4009 of the Resource Conservation and Recovery Act and sections 1442(b)(3)(C), 1443(a) and 1443(b) of the Safe Drinking Water Act (here after referred to as the "covered" programs). In addition, States are encouraged to integrate other environmental programs into the State/EPA Agreement wherever feasible.

ing activities, arrived at through a problem assessment, a multi-year strategy and the determination of what needs to happen in the first year to implement the strategy. EPA recognizes the difficulty of making a multi-year commitment, and therefore views the multi-year strategy as a commitment to a general policy direction, not necessarily to long-term outputs. EPA does however expect the States to be committed to the one-year schedule and outputs outlined in the Agreement and to integrate the programs of RCRA, SDWA and CWA at the State level. EPA realizes that the integration of State programs will be a complex and gradual process, and that while new arrangements are developing, statutory requirements must still be met. Limited resources along with difficult technical and administrative problems will vary and pose constraints in initiating Agreements. Nevertheless, EPA and the States must begin to develop and implement the State/EPA Agreement process.

For its part, EPA will provide grant funds to help finance the activities to which the State and EPA agree. The EPA involvement does not end there, however. It is recognized that coordination and integration of programs at the State level have associated costs, and EPA will provide technical assistance to help the States integrate programs. EPA will also conduct monitoring, issue permits in many cases and administer the construction grants program, delegating authority to the States, consistent with the overall Agreement.

Although the States and EPA will have primary responsibility for negotiating the Agreements, participation of the public and other governmental agencies is important to the negotiation process and to implementation of the Agreements. The regional and local planning and implementation agencies that the States have designated to participate in solid waste management (RCRA) and water quality management (CWA) should work closely with EPA and the States to agree on cooperative strategies, priorities and responsibilities. In accordance with the national policy of encouraging and assisting public participation as set forth in EPA's proposed public participation regulations published in August 1978 (40 CFR Part 25), interested and affected publics will have an opportunity to participate in each step during the development of the Agreements.

The information which follows illustrates how to proceed in developing and negotiating an Agreement, and how to take advantage of some of the opportunities afforded by an integrated approach to environmental problem solving. It presents a series of illustrations where integration across programs could occur through the State/EPA Agreements to avoid duplication of effort and obtain greater protection of the environment through maximizing benefits from overlapping statutes.

II. How to Proceed

STEPS IN THE NEGOTIATION PROCESS

Development of a State/EPA Agreement is an iterative process requiring the personal commitment of high level EPA and State officials as well as local citizens. It requires consultation among EPA Regional program managers, State agencies, regional and local planning and implementation agencies, related Federal agencies and affected or interested publics. The involvement of each participant is important if the objectives of the Agreement are ultimately to be met.

Staff at EPA Headquarters appreciate the vast bank of experience of staff in EPA Regional Offices in negotiating and working with the States on the implementation of environmental programs. This guidance, therefore, is simply a recommended framework or concept. The Regions and States must mold this framework to their unique situations within the limits of available resources. The role of Headquarters is to provide assistance, to promote the integration of various EPA administered programs and to facilitate information exchange on innovative and successful approaches to integrated environmental management through State/EPA Agreements.

DEVELOPMENT OF THE STATE/EPA AGREEMENT PROCESS

The negotiation of the State/EPA Agreement should be part of a process which gets decision-makers together to determine priorities for environmental problems and develop creative solutions. The State and EPA Regional personnel should begin development of the Agreement as early as possible each year. Prior to development, the State, EPA and the public should review basic background information such as current State plans, strategies, and problem assessments, annual EPA operating guidance, applicable laws and deadlines, and funding sources.

The State/EPA Agreement submission schedule should be adapted to the existing submission schedules of the "covered" programs to avoid confusion and duplication of effort. Generally, this means that the draft Agreement should be completed and submitted to the Regional Administrator by June 1 of each year. The Regional Administrator should review the draft and provide comments to the State within 30 days. The final Agreement should be submitted to the Regional Administrator in September of each year.

Generally, the Agreement process should include the following broad activities: (1) Identification of priority problems, (2) identification of available resources, (3) identification of optimal funding, (4) development of a work program, including timing, funding, outputs and responsible parties, (5) implementation of the Agreement, and (6) evaluation and annual revision. However, EPA recognizes that each State has a unique set of environmental problems, political forces and administrative institutions. We therefore wish to emphasize that the Agreement is a flexible mechanism which is intended to accommodate such variations in each State.

Program barriers to coordination and integration of environmental programs under the Agreement process may be encountered and will have to be overcome. A number of States will face problems in attempting to integrate programs because the programs are located in different agencies within the State. This guidance is not intended to force reorganization and consolidation of current State agency structures, responsibilities and authorities or to change existing grantor-grantee relationships.

To facilitate program integration, the Governor may decide to appoint someone in his or her office to coordinate among departments and act as negotiator in the Agreement process. State interagency work groups may provide another way to reduce program barriers. Such work groups will improve communication, but may not be able to overcome "turf" conflicts among various agencies and interests. The resolution of such conflicts and the overall success of the State/EPA Agreement will be determined by the commitment of the Governor, the environmental management agencies, local governments, citizens and other interested parties along with US EPA.

The Regional Administrator has the option of negotiating the Agreement with one or more agencies. Where the Regional Administrator negotiates with more than one agency, it is recommended that a lead State contact be designated.

COMPONENTS OF THE STATE/EPA AGREEMENT

The key to the success of the Agreement is flexibility and accommodation of individual problems and resource constraints, as well as capabilities, in each State. Keeping this in mind, the major components of the Agreement are:

(1) A brief statement of the environmental problems, goals and objectives to be met through activities under the State/EPA Agreement. The statement

should be based on the State problem assessments, strategies or other identification of needed activities for the "covered" programs. To the extent feasible, the State is encouraged to prepare an integrated multi-year strategy to be updated annually. EPA recognizes the difficulty in making a long-term commitment and therefore views the strategy as a commitment to a general policy direction, not as a long-term commitment to specific outputs.

(2) A detailed work program based on a multi-year strategy, or reference to such detailed work program, strategies and individual program memoranda which are to be considered covered by the signed Agreement. The detailed work program may be an overall compilation of specific work programs which meet the requirements of the regulations governing each of the "covered" programs.

(3) A summary of the major integrated work elements compiled from the detailed work program(s), as well as EPA actions needed.

(4) Other information and coordination requirements which the Regional Administrator determines are necessary to meet the goals of the Agreement.

(5) A signature page for the State and Regional Administrator to sign the State/EPA Agreement.

If the Agreement is longer than 20-25 pages, it is recommended that a summary be prepared for use by EPA, the States and the public as an overview of the State/EPA Agreement and of the work to be performed during the coming year.

PUBLIC INVOLVEMENT IN THE STATE/EPA AGREEMENT PROCESS

Although the States and EPA are responsible for negotiating the Agreement, it is crucial that the public and other interested parties also participate in the process. In accordance with the national and EPA policy of encouraging and assisting public participation, and proposed regulations under 40 CFR Part 25 and 40 CFR Part 35, Subpart G requiring public participation, interested and affected publics have the opportunity to participate in each step of the development of the Agreements. Specific requirements for public participation are contained in the proposed public participation regulations (40 CFR Part 25) and the proposed water quality management regulations (40 CFR Part 35, Subpart G).

In addition, the regional and local planning and implementation agencies that the States have designated to participate in solid waste management (RCRA), water quality management (CWA), and other environmental management programs must work closely with EPA, the States, and the public to agree on cooperative strategies, priorities and responsibilities.

It is recommended that at least 30 days prior to beginning work on the State/EPA Agreement, the public should be notified through the uses of existing State and EPA mailing lists, the mass media, and other available means about the goals and scope of the potential Agreement. During the development of the Agreement, the State should also consult, in a timely manner, with advisory committees, such as those set up by the 208 process, and other interested and affected individuals and groups. As a draft Agreement nears completion, a fact sheet should be prepared, mailed, and otherwise made public along with the notice of a public meeting or hearing. Public comments from the meeting or hearing and other sources should be considered and integrated where possible into the final Agreement. A summary of public comments presented during the development of the Agreement, and a summary of the State's responses to those comments, should be included with the final Agreement when it is submitted to the Regional Administrator. This information should be made available to the public. The State/EPA Agreement should be summarized and widely distributed to the public. In addition, the public's views should be considered in any EPA evaluations of State/EPA Agreements.

Wherever possible, the public participation requirements of the "covered" programs should be combined. For example, the water quality management and solid waste management programs have similar requirements which could be coordinated readily. Possible areas for consolidation and coordination include advisory committees, public information programs and public hearings or meetings. It should be emphasized that the public remain actively involved in the implementation of the specific programs within the State/EPA Agreement, once the Agreement is negotiated.

GRANT APPLICATION AND ADMINISTRATION

In general, applicants for grants from EPA must complete an application form for each grant, along with a work plan. Since the State/EPA Agreement should result in an integrated FY 1980 work plan covering water quality, water supply and solid waste programs, the process should greatly simplify grant procedures. The Agreement, with attached work program(s), can serve as the narrative portion of grant requests, thereby reducing paperwork.

Generally, integrated work programs may include common work elements, drawing funding from more than one "covered" program. In such cases, the grant application should specify the amount and percentage of EPA program funds attributable to each of the "covered" programs for each work element.

The State, with approval of the EPA Regional Administrator, may use the same integrated work plan in its applications for the various categorical grants (e.g., solid waste, drinking water), so long as it clearly identifies the source or sources of funds it will use to pay for each product and provides details on projected work outputs. The Regional Administrator should ensure that each State agency involved in the Agreement has effective financial management procedures to ensure that the funds are used for the purposes agreed to.

One of the major goals of the State/EPA Agreement is to reduce paperwork. Use of the integrated work program in each grant application is one way it will reduce paperwork. However, it is recognized that initially there will be additional paperwork to develop the Agreement. But after this initial period, it is anticipated that not only will the paperwork and time required to manage the environmental programs be reduced, but more importantly, the quality of environmental protection programs will be enhanced.

FUNDING FLEXIBILITY

Funding shifts among the "covered" programs (except for 205(g) construction management assistance grants) are possible. The annual EPA operating guidance will contain advice concerning this funding flexibility and the procedures for State funding transfers based on EPA reprogramming. At this time, EPA headquarters has authority to shift approximately 10% of its funds among any agency programs. No transfer of funds will be allowed, however, which diminishes the ability of a program to achieve its statutory objectives. At the State and areawide or local level, the flexibility may not be as great.

BUILDING STATE AND AREAWIDE CAPABILITY

It is the intent of EPA to strengthen the capability of States and areawide agencies to manage their environmental programs through the State/EPA Agreement process. To help in developing the Agreements, a new section is being established within the Office of Water and Waste Management in EPA Headquarters. It will assist the Regions in reviewing proposed State/EPA Agreements and establish an information exchange and assistance mechanism. Procedures and approaches which are innovative and successful in integrating various environmental programs will be provided

to the States and Regions through this exchange mechanism. The new section will also develop guidance regarding approaches for integrating environmental management programs and provide "hands on" assistance in developing the Agreements to the extent that resources are available.

III. Illustrations

The following section illustrates how the State/EPA Agreement could be used to integrate various programs to resolve common problems facing the Regions and States.

These illustrations indicate opportunities for linking authorities from the Safe Drinking Water Act, the Clean Water Act, and the Resource Conservation and Recovery Act. It should be emphasized that other environmental program authorities could also be included. Although they are only illustrations, hopefully they will stimulate Regions and States to explore approaches to integrate programs to solve specific environmental problems. Illustrations are presented for municipal sludge management and groundwater pollution, as well as a variety of other opportunities for coordinating and integrating environmental programs.

The funding situation which accompanies cross-cutting program integration promoted by the State/EPA Agreement is complex. To help clarify the situation, the following hypothetical illustrations include funding eligibility matrices which correlate general program activities and State and Federal sources of funds. The Regions and States may find similar tools useful as they negotiate their strategies and one-year work programs.

The accompanying illustrations emphasize the importance of assessments and State multi-year strategies in developing State/EPA Agreements. It is important to note that although a strategy is desirable, it is not necessarily part of the Agreement itself.

Illustration 1—Municipal Sludge Management

INTRODUCTION

Disposal of sludge has become a major issue in recent years, as disagreements over selection of sites and disposal techniques have occurred at the local, State and Federal levels. Municipal waste treatment plants generate five million dry metric tons of sludge per year. This rate is likely to substantially increase as a result of environmental legislation calling for high standards of wastewater treatment. Presently, about 25 percent of the sludge is landfilled, 25 percent is applied to the land, 15 percent is disposed of in the oceans and 35 percent incinerated.

Each disposal method poses potential environmental problems. Landfilling may result in ground and surface water contamination by heavy metals, viruses and bacteria, as well as the common pollutants. Land application of sludges containing heavy metals can pose a threat to public health as the pollutants enter the food chain. Ocean dumping adversely impacts the marine environment and incineration of sludge contributes to air pollution.

BACKGROUND

Federal requirements, guidance and financial assistance to States and local agencies for the management of municipal sludge are authorized by the Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA) and Marine Protection Research and Sanctuaries Act (MPRSA).

RCRA

According to definitions in RCRA, wastewater treatment sludge is a solid waste, falling under the authority of the State Solid Waste Management (SWM) programs outlined in Subtitle D. Section 4004(a) of that Subtitle requires EPA to issue regulations containing minimum criteria for determining which solid waste disposal facilites pose a "reasonable probability of adverse effects on health or the environment." For municipal sludge, EPA is initiating development of an integrated regulation under both section 4004(a) and section 405(d) of the Clean Water Act. (See below.)

In Subtitle D, RCRA prohibits unacceptable open dumping practices. Over the next several years, each State will compile an Open Dump Inventory which will consist of a list of disposal sites (including sludge disposal sites) to be closed or upgraded. The Open Dump Inventory is one component of State Solid Waste Management planning.

CWA

The Clean Water Act has many requirements which relate to management of municipal wastewater treatment sludge. First, in compliance with section 405(d) which Congress added to CWA in 1977, EPA is developing regulations for municipal sludge disposal and use. This regulation for municipal sludge will satisfy both section 405(d) and also section 4004(a) of RCRA.[a] All sludges originating from publicly owned treatment works (POTW) are included under these regulations. NPDES permits will, whenever possible, include sludge disposal conditions, thereby eliminating the need for separate permits.

[a] Regulations for sludge management are being developed by EPA, and will be proposed in mid-1979.

The regulations for municipal sludge will specify requirements for owners and operators to analyze sludge for cadmium and other toxics and to determine appropriate application rates and monitoring requirements for land application. The regulations will also cover thermal reduction, as well as giveaway and sale programs.

The second aspect of CWA affecting municipal sludge is the construction grants program in Title II. This program provides Federal grants for construction of municipal wastewater treatment facilities, including those for sludge management. During the facility planning phase of the construction grant process, local sewage agencies evaluate the alternatives by which ultimate disposal of sludge can be affected. EPA will not approve such a facility plan without a cost-effective sludge management portion.

The pretreatment requirements in section 307 are the third part of CWA related to municipal sludge management. Pretreatment of industrial discharges into municipal wastewater treatment systems can substantially reduce contaminant levels in sludge and reduce the dangers of sludge disposal. EPA has published final general pretreatment regulations (40 CFR Part 403) and is developing specific pretreatment standards (40 CFR Part 200-to-end) for the 21 most significant industry groups, with special emphasis on toxic pollutants.

The Water Quality Management (WQM) program operating under sections 106, 208 and 303 is another important CWA program related to municipal sludge. The WQM plans developed by States and areawide agencies must include a program to control the disposition of all residual waste generated in an area which would affect water quality. However, the amount of emphasis a particular WQM agency gives to municipal sludge depends on local, State and EPA priorities.

SDWA

Three major activities under SDWA relate directly to the management of municipal sludge. First, under section 1442, each State is conducting a Surface Impoundment Assessment (SIA) to locate all surface impoundments and assess them for pollution potential. (See also the next illustration on groundwater pollution.) The SIA can be a screening device to assist the States in setting priorities for their Open Dump Inventories under RCRA, Subtitle D.

Second, the designation of a sole source aquifer under section 1424(e) can affect sludge disposal. Sole source aquifer designation may provide protection of a drinking water aquifer and prohibit funding of any Federal project which endangers this source. The

siting of landfills or land application of sludge over a designated sole source aquifer as part of a Federally assisted project could be prohibited if it may endanger the aquifer.

The third SDWA program which concerns municipal sludge is the Underground Injection Control (UIC) program under section 1421. Any sludge injected into the ground, or into an abandoned well or mine, would come under the authority of the UIC program once it is finalized.

MPRSA

The Marine Protection Research and Sanctuaries Act (MPRSA) requires EPA to establish a permit system for ocean dumping. Except in accordance with published criteria, ocean dumping is to be phased out by December 31, 1981. Municipal wastewater treatment sludges and other wastes dumped in the ocean are included in the coverage. Ocean dumping of sludge is currently managed through interim permits which EPA issues for one year only.

MUNICIPAL SLUDGE MANAGEMENT IN THE STATE/EPA AGREEMENT

Problem Assessment

An essential step in developing a comprehensive program for sludge management is the problem assessment, which identifies the magnitude of the problem that the strategy must address. The sources of information vary from program to program. Under the Safe Drinking Water Act, the Surface Impoundment Assessment is currently in progress and will provide valuable information for the comprehensive RCRA Open Dump Inventory that the States will conduct beginning in 1979. The Water Quality Management process can offer valuable information on sludge management needs on a local or statewide basis and provide an assessment of the political, institutional and financial implications of sludge disposal.

Strategy Development

The State and EPA should develop a multi-year strategy which will define long-term goals, set priorities and establish responsibilities. It should correlate environmental programs with priority problems and provide for a logical progression of problem resolution specifically addressed in the annual work program. Public participation is strongly encouraged in strategy development. In addition, the strategy should include a funding summary for the various priority activities scheduled over the multi-year period.

Outlined below are hypothetical strategy elements that a State might develop to address a municipal sludge problem:

Goals. A State faced with a municipal sludge disposal problem might establish multi-year goals similar to these:

- End the practice of disposing municipal sludge within open dumps.
- Implement industrial pretreatment programs to encourage beneficial use of municipal sludge for land spreading applications.
- End ocean dumping of municipal sludges by 1981.

Priorities. The multi-year strategy should identify specific priority activities related to the above goals. Because the strategy will likely address several important related problems, it should assign a priority to the overall residuals problem, in light of the total resources available to the State and according to public values in the affected community. Of course, the States and EPA must always consider schedules and deadlines mandated by law or established by regulation when setting priorities. Violation of statutory deadlines can cause funding delays in some cases.

Once overall priorities are established, specific priorities within the municipal sludge problem area should be developed. Priorities could be assigned on a case-by-case basis, on a geographical basis or determined on the relative problem severity of a disposal method.

Anticipated Activities. Once goals and priorities are established, the State would proceed to define specific activities as necessary to accomplish the goals. With respect to the first hypothetical goal, to end the practice of disposing municipal sludge within open dumps, the State may define the following activities:

- Identify and classify all open dumps for the Open Dump Inventory under RCRA; utilize criteria published by EPA to establish those sites which pose significant environmental and health hazards.
- Develop compliance schedules for open dumps that fail to meet RCRA criteria.
- Coordinate sludge forecasting and disposal alternatives between construction grant and solid waste management agencies.
- Incorporate sludge conditions into NPDES permits; include requirements for monitoring in and adjacent to sludge disposal sites to determine levels of heavy metals, persistent organics, pathogens and nutritents entering surface and groundwater.
- Develop legislation to allow for implementation of open dump corrective programs.
- Ensure that adequate public participation programs are developed and operational during all phases of this management program.
- Encourage the use of alternative and innovative technologies (e.g., beneficial use, energy recovery) in developing options for sludge disposal.

The second hypothetical goal, to implement an industrial pretreatment program for sludge disposal, may include the following activities:

- Incorporate pretreatment conditions into NPDES permits.
- Develop procedures for landfilling operations in accordance with the Guidelines for Land Disposal of Solid Wastes (40 CFR Part 241 Appendix III); pretreatment requirements and procedures may also be necessary to protect air quality where sludge is disposed of through incineration.

The final goal of ending ocean dumping of municipal sludges by 1981 could result in the State planning the following activities over the multiyear period:

- Develop compliance schedule for phasing out the dumping of sludges at sea.
- Develop alternative methods for the disposal of sludges.
- Establish enforcement mechanisms for interim permits and the eventual prohibition of ocean dumping.
- Establish priorities for use of construction grants to fund sludge disposal facilities.

Responsible Agencies. The strategy should identify the responsibilities of State and other (Regional, local and interstate) authorities in the development and implementation of proposed programs.

Funding Sources. Agreements on the distribution of Federal and State funds to responsible authorities should be established in the strategy. In the following section a discussion of the one-year work program and a funding matrix are included. They identify the range of possible funding sources available to address the municipal sludge problem area.

One-year Work Program

As in the strategy development section, a hypothetical State one-year work program may be useful to illustrate several of the possible components and relationships in an annual work program for sludge management. A more generalized list of possible activities conducted under a sludge management program is included in a matrix following this discussion.

For the sake of brevity, the sample work program outlined here will focus on only *one of the three example goals—to prohibit the practice of disposing municipal sludges within open dumps.* Each of the activities outlined in the strategy for this goal is translated into specific outputs expected within the one-year time frame.

For the purpose of this discussion, assume that the State has delegated many responsibilities for addressing the municipal sludge problem in several adjacent counties within the State to a Regional planning body. Because the municipal sludge issue is frequently a concern in urban and metrpolitan areas, a Regional planning organization may be best suited to conduct some of the tasks.

Listed below are the sample outputs for a hypothetical municipal sludge management program that will be produced either by the State or delegated to a Regional agency:

Output 1: Identify throughout the Region all facilites disposing of municipal sludges. Coordinate with the SDWA Surface Impoundment Assessment.

Agency Responsible: Regional Solid Waste Office.

Funding Sources: RCRA 4008, SDWA Special Project, CWA 208, CWA 106.

Output 2: Determine which facilities are unacceptable and are serious pollution contributors based on RCRA land disposal criteria, and State standards.

Agency Responisble: Regional Solid Waste Office.

Funding Sources: RCRA 4008, RCRA 3011, CWA 208, CWA 106.

Output 3: Monitor facilities contributing the most pollution.

Agency Responsible: Regional Water Pollution Control Office

Funding Sources: RCRA 4008, RCRA 4009, CWA 106, CWA 208, SDWA 1442.

Output 4: Establish compliance schedules for (x) open dumps accepting municipal sludgers, in conjunction with the State.

Agency Responsible: State Solid Waste Office.

Funding Sources: RCRA 4008, CWA 208, CWA 106.

Output 5: Establish new facility sites for (x) open dumps by August 1979.

Agency Responsible: Regional Solid Waste Office.

Funding Sources: RCRA 4008, SDWA 1442, CWA 106, CWA Facility Planning, CWA 208.

Output 6: Adopt enforcement and permitting procedures for the sludge disposal practices, in conjunction with the State.

Agency Responsible: State Solid Waste Office.

Funding Sources: RCRA 4008, RCRA 4009, RCRA 8006, CWA 208, CWA 106.

Output 7: Develop public participation program keyed to activities occurring during the fiscal year.

Agency Responsible: Regional Solid Waste and Water Pollution Control Office.

Funding Sources: RCRA 4008, CWA 208.

It is important to keep in mind that the above work program is only meant to be a simple example of outputs negotiated between the local agencies, States and EPA. Each out put wiill likely have several components that must be identified and agreed to. These components may include: Costs, disbursement schedules, milestones, responsible agencies and funding sources.

[6560-01-C]

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FUNDING MATRIX

(includes State matching share)

Note: "x" indicates activity is eligible for either full or partial funding.

MUNICIPAL SLUDGE MANAGEMENT

ACTIVITIES \ FUNDING SOURCES	CWA								RCRA				SDWA					
	106 - State program grants	109 - State training grants	Step 1 - Construction grant (Facility planning)	Step 2 & 3 - Construction grants (plans, specs, construction)	Construction mgmt - Asst grants (Excess)	208(f) - Areawide waste treatment management grants	208(j) - Cost-sharing for rural BMP's (USDA)	314 - Clean lakes grants	3011 - State hazardous waste program grants	4008 - Solid waste mgmt, resource cons., haz waste mgmt grants	8005/- Special studies & resource 8006 recovery facilities grants	8001/- Research & demonstrate facil- 8004/ ity grants	SIA - Special project	1442 - Research, assistance, training grants	1443(a) - State program grants for public water supervision	1443(b) - State program grants for underground inject. cont	1444 - Special study and demonstration grants	Sec 3 - Rural water survey
Locate sludge disposal sites	X		X[a]			X				X			X					
Assess surface and groundwater quality in sludge disposal areas	X		X[a]			X	X	X[b]		X				X				
Determine problem severity of sludge disposal sites	X		X[a]			X				X			X					
Develop slude volume projections	X					X				X								
Develop monitoring programs for sludge disposal facility	X					X				X				X				
Develop procedure for giving notice of closure, hearing & appeals						X			X	X								
Develop administrative procedures for sludge disposal operations					X	X			X	X	X	X						

[a]Grants on a site specific basis to POTW owners and operators

[b]Grants on a site specific basis.

FUNDING MATRIX
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(includes State matching share)

Note: "x" indicates activity is eligible for either full or partial funding.

MUNICIPAL SLUDGE MANAGEMENT

ACTIVITIES	FUNDING SOURCES	CWA								RCRA				SDWA					
		106 - State program grants	109 - State training grants	Step 1 - (Construction grant Facility planning)	Step 2 & 3 - Construction grants (plans, specs, construction)	Construction mgmt - Asst grants (Excess) ($205(g))	208(f) - Areawide waste treatment management grants	208(j) - Cost-sharing for rural BMP's (USDA)	314 - Clean lakes grants	3011 - State hazardous waste program grants	4008 - Solid waste mgmt, resource cons., haz waste mgmt grants	8005/- Special studies & resource 8006 recovery facilities grants	8001/- Research & demonstrate facil- 8004 ity grants	SIA - Special project	1442 - Research, assistance, training grants	1443(a) - State program grants for public water supervision	1443(b) - State program grants for underground inject. cont	1444 - Special study and demonstration grants	Sec 3 - Rural water survey
Assess feasibility of resource conservation & recovery programs							X			X	X	X	X						
Implement alternatives to control pollution from sludge disposal				X[a]	X[a]		X	X			X	X	X		X				
Develop training and technical assistance programs		X	X				X				X	X			X				
Develop hazardous sludge regulatory programs							X			X			X						
Build enforcement capabilities to close & upgrade disposal sites							X			X	X		X						
Establish reporting & recording mechanims for hazardous sludges							X			X	X								
Permit development and issuance		X								X	X								
Establish public involvement program		X		X[a]		X	X	X	X[b]	X	X	X	X						

[6560-01-M]

ILLUSTRATION 2.—GROUNDWATER POLLUTION (PITS, PONDS AND LAGOONS)

INTRODUCTION

Groundwater pollution from pits, ponds and lagoons is an environmental problem that requires coordinated action under several EPA authorities. If other sources are adversely impacting the groundwater quality, such as underground injection or failing septic tanks, control programs for these sources should be included. Pits, ponds and lagoons—generally known as surface impoundments—have the following characteristics: (1) They are used primarily for storage, treatment or disposal of wastes in the form of fluids; (2) they are constructed above, below or partially in the ground; (3) they may or may not have permeable bottoms or sides, allowing their contents to infiltrate into the water. Surface impoundments are used for the treatment or storage of wastes or by-products from municipalites. industries, agriculture, mining and oil and gas drilling.

The problem on which this example focuses is unplanned discharges from surface impoundments as opposed to regular discharges to surface streams regulated by NPDES permits. Surface impoundments used for the planned storage of materials, such as polishing ponds or sludge lagoons, are not as crtical to the pollution problem as are accidental discharges or poorly designed surface impoundments. These unplanned discharges, generally in the form of seepage into groundwater, are a shared responsibility of EPA solid waste, drinking water, and water quality management programs.

BACKGROUND

Many EPA planning and implementation programs are involved in the study and solution of groundwater contamination from pits, ponds and lagoons. EPA and the States may plan for and implement controls on surface impoundments through the mechanisms of the Clean Water Act, Resource Conservation and Recovery Act and Safe Drinking Water Act.

RCRA

A major planning effort related to pits, ponds and lagoons is State Solid Waste Management (SWM) planning conducted under Subtitle D of RCRA. States must develop SWM plans which assign planning and implementation responsibilities among State and local governments, prohibit open dumping, identify regulatory powers needed to implement the plan and include several other provisions.

One major requirement of the State SWM plans is completion of the Open Dump Inventory, which EPA must publish under Subtitle D of RCRA. The States will assess every pit, pond, lagoon, landfill and land spreading facility to determine if it is an open dump. Open dumps must be closed or upgraded to sanitary landfills within five years after EPA publishes the inventory. The Office of Solid Waste has suggested the following priorities for the development of the Open dump Inventory: municipal landfills in FY 1980, municipal sludge disposal sites in FY 1981, industrial sites in FY 1982, and agricultural and mining sites after FY 1982.

Since the Open Dump Inventory will initially focus on municipal solid waste landfills and sludge disposal sites, it will probably not include all pits, ponds and lagoons until after FY 1981. In the meantime, the Surface Impoundment Assessment (SIA) will contain most of the information on the location and potential of groundwater pollution threats from pits, ponds and lagoons.

If a surface impoundment is used to hold or dispose of a hazardous waste, the State or EPA will issue a permit specifying the conditions under which it may be disposed of or stored. It is likely that there may be some lag time before every surface impoundment holding a hazardous material receives a permit. Therefore, once an impoundment operator has applied for a permit, the operation will be considered to have "interim status." This means that the facility should comply with the § 3004 regulations (standards applicable to owners and operators of hazardous waste treatment, storage or disposal facilities) until it gets a final permit. Development and implementation of State hazardous waste permit programs is supported by grants to States under Subtitle C of RCRA.[a]

If the material disposed of or stored in the surface impoundment is not a hazardous material, EPA is relying on the States to implement controls under the SWM program or the WQM program. While implementation is partially supported by State program grants, its success is strongly dependent on State and local funds and initiative and the support of other Federal agencies.[b] If a State fails to act on a groundwater pollution problem involving a nonhazardous substance, EPA could withhold State program grants under the CWA and RCRA.

CWA

The Water Quality Management (WQM) program is another major effort which may address groundwater pollution from pits, ponds and lagoons. Under sections 208(b)(2)(J) and (K) of the CWA, States and designated areawide agencies must prepare comprehensive plans to control pollution from disposal of residual wastes and subsurface disposal of pollutants. State and areawide WQM planning efforts are funded primarily by § 208 grants. As of August 1978, there were 225 State and areawide WQM agencies.

Where severe local or Statewide groundwater pollution problems exist as a result of surface impoundments, WQM funding could help bring about a solution to the problem. One of the highest priorities of the WQM program in the next five years is protection of groundwater quality.

NPDES permits issued by EPA or the States under section 402 of CWA, may also affect surface impoundments. The CWA provides authority to require as a condition of an NPDES permit, the use of best management practices (BMP) at industrial sites to control pollution from toxic and hazardous pollutants. BMP may also be used at municipal wastewater treatment ponds for the protection of groundwater quality, and may be prescribed to control spills, runoff, leaks, storage and disposal of wastes.

SDWA

Under the authority of section 1442 of SDWA, States are beginning to conduct the nationwide Surface Impoundment Assessment (SIA) which is scheduled for completion in July 1979. In the SIA, the States locate and count surface impoundments, select random samples for analysis and determine groundwater pollution potential from the various types and locations of impoundments.

Also, section 1431 of SDWA gives the Administrator of EPA broad emergency powers to protect the health of persons from imminent and substantial danger through contaminated drinking water supplies. This emergency power could be initiated if there is a threat to public health resulting from surface impoundment seepage.

GROUNDWATER POLLUTION IN THE STATE/EPA AGREEMENT

Problem Assessment

To develop an effective and coordinated program for control of groundwater pollution from pits, ponds and lagoons, a problem assessment is essential. The information necessary to determine the extent of groundwater contamination should be available from the Open Dump Inventory required under section 4005 of RCRA, the Surface Impoundment Assessment under section 1442(b)(3)(c) of SDWA,

[a] EPA published proposed hazardous waste criteria regulations and hazardous waste permit regulations in December 1978.

[b] For example, surface mining permits issued by the Office of Surface Mining, Department of Interior or by States authorized to issue such permits.

the State WQM plans under sections 208 and 303 of the CWA and the State SWM plans under section 4008(a)(1) of RCRA.

The SDWA Surface Impoundment Assessment, together with data from facility plans and information from the USGS could provide a strong data base to assist in the conduct of the RCRA Open Dump Inventory. The WQM program can play a large role in the problem assessment of groundwater pollution from pits, ponds and lagoons. Through both past planning efforts and the continuing planning phase, the WQM program can provide technical experience, insight into overcoming institutional barriers and can highlight the ineffectiveness of existing controls in achieving water quality goals. The State should identify in the one-year work program any additional data needs for studying groundwater pollution and assign responsibility as appropriate.

Strategy

If the State assessment indicates that surface impoundments are a water quality problem, either across a State or in a particular substate area, the State should develop a multi-year strategy for addressing the problem. This long-term strategy should include the goals, priorities, a summary of anticipated planning and implementation activities, an identification of responsible agencies, a public participation work plan and a funding summary.

The following discussion presents hypothetical multi-year strategy elements for addressing groundwater pollution from pits, ponds and lagoons:

Goals: A State faced with a major groundwater pollution problem might establish multi-year goals similar to these:

- Identify and assess pollution potential of all surface impoundments in the State, especially with regard to toxics and groundwater contamination.
- Close or upgrade all surface impoundments which are classified as open dumps.
- Write permits for all remaining pits, ponds and lagoons, including those with surface discharges, hazardous wastes, municipal sludge and the disposal associated with an industrial site that has a surface discharge. Where applicable, these permits should be part of an integrated permitting process. For those pits, ponds and lagoons not covered by a permit, implement alternative controls such as best management practices.

Priorities. As the State is developing its multi-year strategy, it should reflect on the relative importance of groundwater pollution from pits, ponds and lagoons to the overall pollution situation in the State. With this in mind, together with the intermedia effects that this includes, the State might proceed to identify the worst cases of pollution from surface impoundments and assign them high priority for remedial action. These cases shoul be identified by name, geographic area, basin, or type, such as industrial or mining disposal site. This priority setting should incorporate public views gained through the public participation process.

Anticipated Activities. Having set goals and determined priorities, the States would proceed in this hypothetical example to define the anticipated multi-year planning and implementation activities necessary to reach the goals. With respect to the first goal, to identify and assess the pollution potential of all the surface impoundments in the State, the State might plan to:

- Locate all pits, ponds and lagoons on maps and classify them.
- Assess these surface impoundments against the open dump criteria being developed under section 4005 of RCRA.
- Determine if the impoundments hold hazardous wastes as defined in the hazardous waste criteria being developed under section 3004 of RCRA.
- Coordinate monitoring of the pollution from surface impoundments with other monitoring efforts directed at surface and groundwater.
- Determine the potential health hazard associated with each given surface impoundment.

In support of the second goal to close or upgrade surface impoundments classifed as open dumps, the State should plan, over a multi-year period to:

- Classify surface impoundments as open dumps or sanitary landfills.
- Develop procedures for giving notice of closure, hearing and appeal.
- Set up enforcement mechanisms, develop a new State legislation as necessary and conduct enforcement training.
- Use the WQM process to develop locally acceptable solutions and raise public consciousness regarding the problems of surface impoundments, especially toxic groundwater pollution.
- Implement BMP to control pollution from pits, ponds and lagoons.

To achieve the third goal of writing permits or implementing alternative controls the State might plan the following activities over a multi-year period:

- Coordinate permits for surface impoundments with existing permit programs (NPDES, sludge, hazardous waste).
- Develop a permitting function, including the identification of staff, budget and responsibilities.
- Coordinate enforcement activities for surface impoundments with other applicable enforcement authorities (e.g., NPDES).
- Coordinate monitoring of pollution from surface impoundments to support and document permitting process.
- Where appropriate, compliance schedules should be tied into grants for accountability.
- Implement BMP to control pollution from pits, ponds and lagoons.
- Use the WQM process to evaluate the effectiveness of past control techniques.
- Coordinate public participation activities, especially emphasizing toxics and groundwater contamination from disposal of wastes.

Responsibilities Agencies. The strategy should identify the responsibilities of State and other (Regional, local and interstate) authorities in the development and implementation of proposed programs.

Funding Sources. Activities included in the multi-year strategy should be tied to a specific funding source or combination of sources to provide budget accountability. Both the one-year work program and the funding matrix which follow, provide examples of the range of possible funding sources and how these sources might be used for addressing groundwater pollution.

One-year Work Program

When the State and EPA have worked out a strategy for dealing with groundwater pollution from pits, ponds and lagoons, the State should proceed to develop a one-year work program to be attached to the Agreement.

In the work program the State would examine the strategy and set priorities for the upcoming year. The State would also identify the time frame for completing its selected outputs. Outputs should be tied to line items in the budget for accountability. The following funding matrix matches the generalized groundwater pollution program activities to funding sources. Many activities may be funded by several possible sources.

In this hypothetical illustration, the State will produce six outputs related to groundwater pollution from pits, ponds and lagoons in FY 1980. Assume that the State organization includes a State Department of the Environment with three divisions—Water Pollution, Solid Waste and Water Supply. The six outputs for the first goal are:

Output 1: Transfer of data from the Surface Impoundment Assessment, the WQM plans and USGS data to the Open Dump Inventory.

Agency Responsible: State Solid Waste Division.

Funding Sources: RCRA 4008, SDWA Special Project.

Output 2: Screen the data transfer for indications that a site may be an open dump or hold a hazardous waste.

Agency Responsible: State Solid Waste Division.

Funding Sources: RCRA 4008, RCRA 3011.

Output 3: Assess (x) surface impoundments to determine extent of contamination.

Agency Responsible: State Water Supply Division.

Funding Sources: SDWA 1442, SDWA 1444, CWA 106, RCRA 4008.

Output 4: Visit all municipal sludge disposal sites, conduct field work and assess sites against open dump criteria.

Agency Responsible: State Solid Waste Division.

Funding Sources: RCRA 4008, RCRA 3011, RCRA 8006, CWA 106, SDWA 1442.

Output 5: Monitor surface impoundments, expecially for groundwater contamination and toxics.

Agency Responsible: State Water Pollution Division.

Funding Sources: CWA 106, CWA 208, SDWA 1442, RCRA 4008.

Output 6: Develop and adopt enforcement and permitting procedures to control toxic and other wastes discharged into (x) surface impoundments that are contaminating the ground water.

Agency Responsible: State Solid Waste Division.

Funding Sources: RCRA 3011, RCRA 4008, CWA 106.

These outputs are meant to be only skeletel. The State and EPA negotiation of outputs will be much more complex. Each output has several components including cost, disbursement schedule, milestones, responsible agencies and funding sources. These must be determined in the negotiation process. Since the outputs are agreed to by the State and EPA, both should be accountable for completing them. The Agreement provides valuable information for evaluating the progress being made to clear up pollution across the State and the nation.

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FUNDING MATRIX

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(includes State matching share)

Note: "x" indicates activity is eligible for either full or partial funding.

GROUNDWATER PROTECTION

ACTIVITIES	FUNDING SOURCES	CWA								RCRA				SDWA					
		106 - State program grants	109 - State training grants	Step 1 - (Facility planning)	Step 2 & 3 - Construction grants (plans, specs, construction)	Construction mgmt - Asst grants (Excess)	208(f) - Alternative waste treatment management grants	208(j) - Cost-sharing for rural BMP's (USDA)	314 - Clean lakes grants	3011 - State hazardous waste program grants	4008 - Solid waste mgmt, resource cons., haz waste mgmt grants	8005/ - Special studies & resource recovery facilities grants	8006	8004/ - Research & demonstrat. facility grants	SIA - Special project	1442 - Research, assistance, training grants	1443(a) - State program grants for public water supervision	1443(b) - State program grants for underground inject. cont	1444 - Special study and demonstration grants	Sec 3 - Rural water survey
Location of impoundments		X		X[a]			X				X				X	X				
Dev. and impl. monitoring pgrms.		X		X[a]			X				X					X				
Assess surface and groundwater quality near pits, ponds & lagoons		X		X[a]			X	X	X[b]	X	X				X	X	X		X	X
Det. potential health hazards		X		X[a]			X				X					X			X	
Estb. reporting mech. for haz. wastes							X			X	X			X	X		X	X	X	
Compile Open Dump Inventory		X					X				X				X					
Estb. enforcement mech for closing dumps							X			X	X			X						

[a]Grants on a site specific basis to POTW owners and operators.
[b]Grants on a site specific basis.

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FUNDING MATRIX

(includes State matching share)

Note: "x" indicates activity is eligible for either full or partial funding.

GROUNDWATER POLLUTION

ACTIVITIES	FUNDING SOURCES	CWA								RCRA				SDWA					
		105 - State program grants	109 - State training grants	Step 1 - Construction grant (Facility Planning)	Step 2 & 3 - Construction grants (plans, specs, construction)	Construction mgmt - Asst grants (§205(g)) (Excess)	208(f) - Areawide waste treatment management grants	208(j) - Cost-sharing for rural BMP's (USDA)	314 - Clean lakes grants	3011 - State hazardous waste program grants	4008 - Solid waste mgmt, resource cons., haz waste mgmt grants	8003/recover Special studies & resource facilities grants	8004 - Research & demonstrate facility grants	SIA - Special project	1442 - Research, assistance, training grants	T443(a) - State program grants for public water supervision	1443(b) - State program grants for underground inject. cont	1444 - Special study and demonstration grants	Sec 3 - Rural water survey
Dev. closure & appeals process		X					X			X	X		X						
Dev. training & assistance programs		x	x				x				x			x	x				
Review existing legis & authorities		X		X			X				X								
Permit development & issuance		X								X	X	·							
Dev and implement new legis/ control alternatives		X					X	X	X[1]	X	X				X			X	X
Assess feasibility of resource conservation & recovery programs							X			X	X	X	X						
Establish public involvement program		X		X[a]			X	X	X[b]	X	X					X	X		

[6560-01-M]

OTHER OPPORTUNITIES FOR INTEGRATION

In addition to the illustrations, there are many other opportunities for integration among CWA, RCRA, SDWA and other environmental protection programs. Regions and States may wish to address additional problems and issues as they negotiate State/EPA Agreements. A few such examples include:

1. *Population, Economic, Waste Load and Land Use Projections.* Projections are essential components of all planning programs and some implementation programs. Facility planning, water quality management planning and solid waste management planning, for example, are all concerned with municipal sludge projections. These projections in turn are used to develop NPDES permits.

Uniform population, economic, land use and waste load projections would contribute greatly to the coordination of environmental programs. These projections are frequently mentioned by State, Federal and local interests as needing coordination and integration. It is recommended that State/EPA Agreements contain procedures for preparing disaggregations, making land use projections, and other related tasks. The cost-effectiveness guidelines (40 CFR Part 35, Subpart E, Appendix A) govern both WQM and facility planning with respect to population projections. The Regions and States may also wish to use the same guidelines for projections affecting solid waste and drinking water.

2. *Problem Assessment.* An assessment of environmental problems is another area often cited as suitable for integration. Problem assessment is important to all programs and should drive long-term strategies for problem solving. Assessments are also closely related to population, land use and waste load projections since they cover future as well as present problems.

There are many legislative and regulatory requirements for problem assessments which could be meshed into a single State assessment. Some of the major components might be the Surface Impoundment Assessment, the Open Dump Inventory, discharger inventories and segment classifications, detailed problem assessments funded under the WQM and SWM programs and the Clean Lakes Assessment. Regions and States may wish to adopt a goal of a single problem assessment satisfying the needs of RCRA, SDWA, and CWA and also serving as the 305(b) report to Congress (CWA).

An integrated problem assessment would provide opportunities for innovative techniques, such as a cross-cutting toxics/hazardous assessment to identify the locations, sources and amounts of toxic and hazardous materials, especially toxic "hot spots." Other problem assessment possibilities include analyzing rarely used sources of data (e.g., NPDES self-monitoring data) or to use existing data in new ways (e.g., locate toxic hot spots in relation to drinking water intakes). One related innovative technique already under development is the environmental profile, which four Regions are currently testing. The profile employs an environmental index to describe the overall water quality of specific segments.

An integrated assessment would address both surface and groundwater. Necessary data on groundwater quality and quantity might be obtained from NPDES self-monitoring, from studies funded under WQM or SWM, or from the U.S. Geological Survey (USGS).

3. *Monitoring.* Environmental monitoring conducted under various EPA programs is a potential area in which inefficient or duplicated services may be improved. One output of the State/EPA Agreement might be an integrated monitoring program with funding contributed by all of the various environmental authorities and programs. Such joint monitoring may involve, in addition to EPA and the States, other Federal agencies, local governments and independent associations such as the USGS, the Fish and Wildlife Service, regional planning commissions and private interest groups.

An integrated monitoring program would likely result in shared responsibilities and procedures, provide for easier and more useful data transfer as well as reduce overall costs. Different program areas may share sampling sites, sampling procedures, laboratory certification, quality control programs, training programs and record keeping and data retrieval.

Toxic monitoring and analysis are very complicated and expensive and should be coordinated. States and Regions may wish to give greater emphasis to biological monitoring, such as bioassays for lethal dose and bio-accumulation determinations and measurements of species diversity. This monitoring, together with discharge and ambient monitoring, would be helpful to all program areas and contribute to a better understanding of sources, types and effects of toxic pollutants.

4. *Toxics.* Of the many laws addressing the problems of toxic materials, CWA, SDWA and RCRA provide the authority to control toxics in the environment (as opposed to during manufacture, distribution, and use). Since none of these three laws give blanket authority to control toxic pollution, integration of the various programs dealing with toxic substances is desirable. Integration would be extremely useful in the areas of data collection, permitting as well as monitoring.

States and Regions need information for collecting data on toxic parameters in discharges, surface impoundments, urban runoff, combined sewer overflows, injection wells, landfills, land spreading sites and nonpoint sources such as agricultural runoff. Since isolation and quantification of toxic chemicals is generally difficult and expensive, data collection should be closely coordinated. (See also the discussions of monitoring and problem assessment.)

It is recommended that any permits issued should incorporate toxic limits where appropriate as established in the CWA effluent guidelines (40 CFR Parts 405-460). Development of toxic permit conditions could be a joint responsibility of the NPDES authority and the WQM and SWM programs. Once such a permit is drafted, the Regions and States should establish an interdisciplinary permit review process to ensure that the expertise of all disciplines are included in the review. Procedures for permit development and review could be incorporated specifically into the State/EPA Agreements.

5. *Public Participation.* Public participation in environmental programs is often dispersed among various programs, concerns and issues. This splintering effect makes it more difficult for people to understand the details of environmental problems and the arsenal of Federal, State and local tools available to solve those problems. Further, it diminishes the effectiveness of public input to decisions concerning actions and plans. An integrated public participation strategy (a requirement of the proposed public participation regulations, 40 CFR Part 25) will enhance the public role in the decision process. The proposed public participation regulations apply to programs under RCRA, SDWA and CWA. These proposed regulations require that public participation activities and materials be combined for closely related programs or activities wherever feasible and when such combination would not be detrimental to participation by the widest possible public.

The WQM and SWM programs have similar public participation requirements and coodination between the two programs could be readily achieved. The NPDES public participation requirements could also be meshed with the WQM and SWM requirements through the State public participation strategy.

To attain this integration of public participation as part of the State/EPA Agreement, the States and Regions

should consider the full range of public information and participation activities and events. Possible areas for coordination and consolidation include advisory committees, public participation staff, publications, meetings, hearings, and training courses. Such coordination and consolidation would likely promote better organized dialogue with the public. It would also produce an increased understanding among all decision-makers of the nature of environmental problems and the Federal, State and local programs and capabilities for attacking them, and produce a clear set of priorities for resolving these problems.

6. *Pretreatment and Industrial Waste Management.* Hazardous wastes generated by existing pretreatment and Best Available Technology (BAT) requirements of the CWA although reducing the amount of such wastes discharged into the nation's waters, will continue to increase on-site storage and off-site disposal problems in the coming years. Industrial hazardous waste generation was estimated at 30-35 million metric tons in 1976 (enough to fill the New Orleans Superdome every other day). With implementation of BAT and pretreatment regulations it is estimated that this figure could double by 1990.

Primary Federal authorities and programs for dealing with the treatment, storage and disposal of hazardous wastes are sections 307 and 402 of the Clean Water Act and Subtitle C of the Resource Conservation and Recovery Act (Hazardous Waste Management). Some States have also developed independent, but similar programs.

However, on-site storage is becoming limited and off-site disposal areas are in short supply. Growth in certain industries is being curtailed by lack of economic and environmentally acceptable disposal options. At the same time, the risk of illegal ("midnight") or careless off-site dumping is increasing. Further, significant institutional barriers exist which limit dealing with pretreatment and industrial waste management problems. In many States hazardous waste and pretreatment programs are operated by separate agencies. Although a number of State and areawide water quality management agencies have identified industrial waste storage and disposal problems as a planning priority, there is little evidence that the RCRA authorities are being combined with the Clean Water Act authorities to deal with the problem.

The State/EPA Agreement can be used as the mechanism to coordinate and integrate the development and implementation programs needed to manage industrial wastes and pretreatment. The Agreement can be used to raise the visibility and significance of this problem and can help activate the participation of State and local governments in resolving pretreatment and industrial waste problems.

States unwilling to pursue a comprehensive pretreatment and industrial waste management program should at least be encouraged to integrate the NPDES and RCRA permit programs.

For those States including pretreatment and industrial waste management problems in the State/EPA Agreement, the following areas are among those which can be considered for coordination: joint permits, new disposal site studies and plans for dealing with abandoned wastes. Initially provisions should be made to combine diverse waste management practices and planning options into a unified strategy. This strategy should integrate pretreatment with all other hazardous waste management programs such as standards for spill control (section 311 of the Clean Water Act) requirements for shipping and transporting wastes (DOT regulations) and requirements to control unsafe practices during temporary storage and waste transfer (OSHA regulations). The integration of related requirements for disposal of dredge or fill material and municipal sludge (sections 404 and 405 of the Clean Water Act) should also be considered.

IV. Summary

Congress charged EPA with establishing national environmental standards, carrying out research and development, funding State programs and charting national objectives and policies. Federal, State and local governments plan, develop and carry out pollution abatement programs. In delineating Federal and State roles in the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), and the Resource Conservation and Recovery Act (RCRA), Congress clearly had in mind a Federal/State partnership. The State/EPA Agreement is an example of the Federal/State partnership in action. The Agreement will be the result of a negotiation process between each State and the corresponding EPA Region. Regional and local planning and implementation agencies, and interested or affected publics will also be included in the negotiation process. The process should get together Federal, State and local entities to determine environmental priorities, define intermedia problems and develop creative, efficient and effective solutions.

Two major categories of integration efforts should be undertaken during development and implementation of the Agreement. These include (1) improvement of program management practices through such tasks as the combination of duplicative requirements of two or more programs into a single product which satisfies the legal and administrative requirements of all "covered" programs; and (2) utilization of the resources and authorities of several EPA programs in a joint effort to identify and solve environmental problems that each program has had inadequate resources or authority to deal with.

Beginning in FY 1980, State/EPA Agreements will serve as the mechanism to manage, integrate and coordinate environmental programs in all States, creating joint planning and implementation of SDWA, RCRA and CWA. Each Agreement will be the result of an assessment of the environmental problems facing the State, development of a multi-year strategy to solve those problems, and a determination of specific steps to take during the next year.

The Agreement will reflect State and EPA priorities, timing, responsibilities and allocation of funds. It should also serve as a management tool for use within the Regional office as well as the State, reduce paperwork, and serve as a public information document. The participation of the public and other governmental agencies is important to the negotiation process and to the implementation of the Agreements.

It is the intent of EPA to strengthen the capability of States and areawide agencies to manage their environmental programs in the context of the State/EPA Agreements.

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